

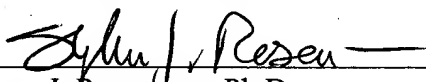
### REMARKS

In response to the Restriction Requirement dated October 1, 2002, Applicants hereby elect Group C directed to methods of identifying an agent suitable for treating a vertebrate subject suspected of being at risk for having an arthritic disorder for examination at this time. Applicants further elect "cow" from the Markush group recited in claim 8 and "osteoarthritis" from the Markush group recited in claim 10. In addition, Applicants elect the rate of ATP synthesis (recited in original claim 44) as an indicator of altered mitochondrial function.

In view of the above election, Applicants hereby cancel claims 1-2, 6-10, and 16-112 without prejudice to the filing of any divisional, continuation, or continuation-in-part application. Accordingly, claims 3-5 and 11-15 are pending. Applicants have also amended claims 3-5, 11 and 15 to eliminate their dependency on canceled claims or their recitation of non-elected subject matter. No new matter has been added. Consideration of the elected claims is now requested.

Attached hereto is a marked-up version of the changes made to the specification and claims by the current amendment. The attached page is captioned **"Version With Markings to Show Changes Made."**

Respectfully submitted,  
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VERSION WITH MARKINGS TO SHOW CHANGES MADE

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In the Claims:

Claims 1-2, 6-10, and 16-112 have been canceled without prejudice.

Claims 3-5, 11 and 15 have been amended as follows:

3. (Amended) A method of identifying an agent suitable for treating a cow vertebrate subject suspected of being at risk for having ~~an arthritic disorder~~ osteoarthritis, comprising:

comparing the rate of ATP synthesis level ~~of at least one indicator of altered mitochondrial function~~ in one or more biological samples obtained from the subject in the presence and absence of a candidate agent, wherein an altered rate of ATP synthesis level ~~of said indicator~~ indicates that the agent alters mitochondrial function; and therefrom determining the suitability of said candidate agent for treating ~~the arthritic disorder~~ osteoarthritis.

4. (Amended) A method of determining the suitability of an agent for treating a cow vertebrate subject suspected of being at risk for having ~~an arthritic disorder~~ osteoarthritis, comprising:

comparing the level of at least one indicator of altered mitochondrial function ~~rate of ATP synthesis~~ in a biological sample obtained from the subject before and after administering to said subject a candidate agent, wherein an altered level of said indicator ~~rate of ATP synthesis~~ indicates that the agent alters mitochondrial function; and therefrom determining the suitability of said candidate agent for treating ~~the arthritic disorder~~ osteoarthritis.

5. (Amended) A method of determining the suitability of an agent for treating a vertebrate subject ~~cow~~ suspected of being at risk for having ~~an arthritic disorder~~ osteoarthritis, comprising:

comparing the ~~level of at least one indicator of altered mitochondrial function~~ rate of ATP synthesis in at least one biological sample obtained from a plurality of subjects before and after administering to each of said subjects a candidate agent, wherein an altered ~~level of said indicator~~ rate of ATP synthesis indicates that the agent alters mitochondrial function; and therefrom determining the suitability of said candidate agent for treating ~~the arthritic disorder~~ osteoarthritis.

11. (Amended) The method of any one of claims ~~1-73~~ 1-5 wherein the biological sample comprises a cell selected from the group consisting of a chondrocyte and a hematopoietic cell.

15. (Amended) The method of any one of claims ~~1-73~~ 1-5 wherein the biological sample comprises an articular chondrocyte and the step of comparing comprises comparing the ~~level of at least one indicator of altered mitochondrial function~~ rate of ATP synthesis in the absence and presence of transforming growth factor-beta.